

=> fil lreg

VIT D (BROAD)

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STRUCTURE FILE UPDATES: 21 NOV 2004 HIGHEST RN 785750-23-4  
DICTIONARY FILE UPDATES: 21 NOV 2004 HIGHEST RN 785750-23-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
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=> fil hcap

FILE 'HCAPLUS' ENTERED AT 08:24:11 ON 23 NOV 2004  
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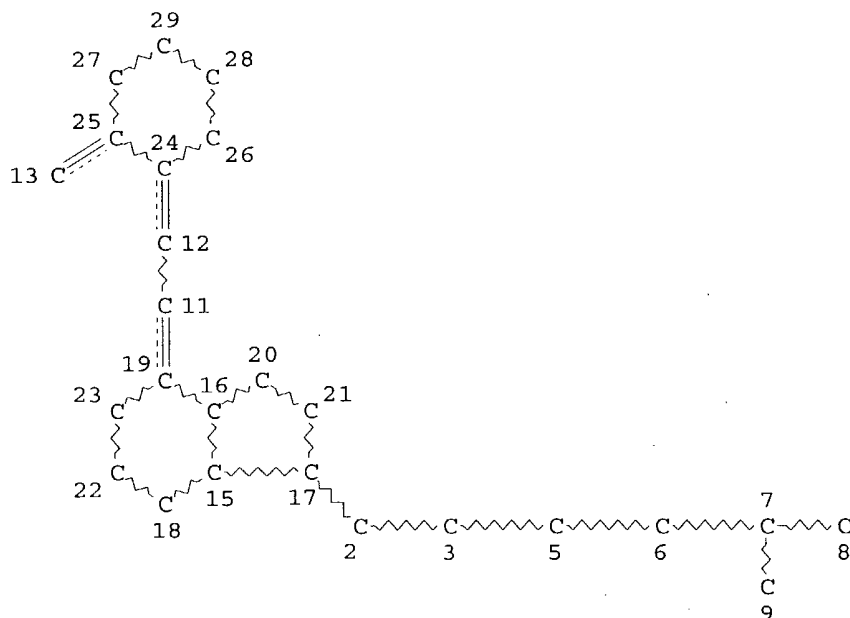
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FILE COVERS 1907 - 23 Nov 2004 VOL 141 ISS 22  
FILE LAST UPDATED: 22 Nov 2004 (20041122/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que 179

L1 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L2 3182 SEA FILE=REGISTRY SSS FUL L1  
 L3 14399 SEA FILE=REGISTRY ABB=ON PLU=ON 591.62.22/RID  
 L4 20062 SEA FILE=HCAPLUS ABB=ON PLU=ON L2  
 L5 9525 SEA FILE=HCAPLUS ABB=ON PLU=ON L3  
 L6 32 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND L5  
 L7 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 19356-17-3/RN  
 L8 ( 2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L7  
 L9 ( 2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L8 OR 19356-17-3P OR 19356-17-3D?  
 L10 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 66612-29-1/RN  
 L11 ( 112)SEA FILE=HCAPLUS ABB=ON PLU=ON L10  
 L12 ( 112)SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR 66612-29-1P OR 66612-29-1D?  
 L13 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L9 AND L12  
 L14 ( 31272)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC) OR 25HCC OR ?CHOLECALCIF? OR VITAMIN D OR (VITAMIN(1W)D) OR VITAMIN D3 OR (VITAMIN(1W)D3)  
 L15 ( 204)SEA FILE=HCAPLUS ABB=ON PLU=ON ?CALCIDIOL? OR ?CALCIFEDIOL? OR ?CALDEROL? OR ?DEDROGYL? OR ?DIDROGYL? OR ?HIDROFEROL?  
 L16 ( 2)SEA FILE=HCAPLUS ABB=ON PLU=ON (RO 8-8892) OR (RO(1W)8(1W)8892) OR (U 32070E) OR (U(1W)32070E)  
 L17 ( 1857)SEA FILE=HCAPLUS ABB=ON PLU=ON (VITAMIN(1W)D?)/CW  
 L18 ( 259115)SEA FILE=HCAPLUS ABB=ON PLU=ON VITAMINS+PFT,NT/CT  
 L19 ( 5811)SEA FILE=HCAPLUS ABB=ON PLU=ON ?PHTHALAZIN? OR ?ISOLUMINOL? OR ABEI  
 L20 ( 2)SEA FILE=HCAPLUS ABB=ON PLU=ON L9 AND L19

L21 ( 4)SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L15 OR L16 OR L17 OR  
 L18) AND L12  
 L22 ( 10)SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L15 OR L16 OR L17)  
 AND L19  
 L23 ( 43627)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)  
 IMMUNOASSAY"+PFT,NT/CT  
 L24 ( 51101)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,  
 NT/CT  
 L25 ( 52656)SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT  
 L26 ( 43)SEA FILE=HCAPLUS ABB=ON PLU=ON (L23 OR L24 OR L25) (L) ((L14  
 OR L15 OR L16))  
 L27 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND (L12 OR L19)  
 L28 ( 14)SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR L20 OR L21 OR L22 OR  
 L27  
 L29 ( 35804)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC)  
 OR 25HCC OR ?CHOLECALCIF? OR ?VITAMIN? D OR (?VITAMIN?(1W)D)  
 OR ?VITAMIN? D3 OR (?VITAMIN(1W)D3?)  
 L30 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L12  
 L31 ( 13)SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L19  
 L32 ( 17)SEA FILE=HCAPLUS ABB=ON PLU=ON L28 OR L30 OR L31  
 L33 ( 36381)SEA FILE=HCAPLUS ABB=ON PLU=ON (D OR D3) (3A) ?VITAMIN?  
 L34 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND L12  
 L35 ( 14)SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND L19  
 L36 ( 18)SEA FILE=HCAPLUS ABB=ON PLU=ON (L34 OR L35) OR L32  
 L37 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 19356-17-3/RN  
 L38 ( 2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L37  
 L39 ( 2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L38 OR 19356-17-3P OR  
 19356-17-3D?  
 L40 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 66612-29-1/RN  
 L41 ( 112)SEA FILE=HCAPLUS ABB=ON PLU=ON L40  
 L42 ( 112)SEA FILE=HCAPLUS ABB=ON PLU=ON L41 OR 66612-29-1P OR  
 66612-29-1D?  
 L43 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L42  
 L44 ( 31272)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC)  
 OR 25HCC OR ?CHOLECALCIF? OR VITAMIN D OR (VITAMIN(1W)D) OR  
 VITAMIN D3 OR (VITAMIN(1W)D3)  
 L45 ( 204)SEA FILE=HCAPLUS ABB=ON PLU=ON ?CALCIDIOL? OR ?CALCIFEDIOL?  
 OR ?CALDEROL? OR ?DEDROGYL? OR ?DIDROGYL? OR ?HIDROFEROL?  
 L46 ( 2)SEA FILE=HCAPLUS ABB=ON PLU=ON (RO 8-8892) OR (RO(1W)8(1W)889  
 2) OR (U 32070E) OR (U(1W)32070E)  
 L47 ( 1857)SEA FILE=HCAPLUS ABB=ON PLU=ON (VITAMIN(1W)D?)/CW  
 L48 ( 259115)SEA FILE=HCAPLUS ABB=ON PLU=ON VITAMINS+PFT,NT/CT  
 L49 ( 5811)SEA FILE=HCAPLUS ABB=ON PLU=ON ?PHTHALAZIN? OR ?ISOLUMINOL?  
 OR ABEI  
 L50 ( 2)SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L49  
 L51 ( 4)SEA FILE=HCAPLUS ABB=ON PLU=ON (L44 OR L45 OR L46 OR L47 OR  
 L48) AND L42  
 L52 ( 10)SEA FILE=HCAPLUS ABB=ON PLU=ON (L44 OR L45 OR L46 OR L47)  
 AND L49  
 L53 ( 43627)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)  
 IMMUNOASSAY"+PFT,NT/CT  
 L54 ( 51101)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,  
 NT/CT  
 L55 ( 52656)SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT  
 L56 ( 43)SEA FILE=HCAPLUS ABB=ON PLU=ON (L53 OR L54 OR L55) (L) ((L44  
 OR L45 OR L46))  
 L57 ( 14)SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND (L39 OR L47)  
 L58 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND (L42 OR L49)  
 L59 ( 14)SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L50 OR L51 OR L52 OR  
 L58

L60 ( 13)SEA FILE=HCAPLUS ABB=ON PLU=ON L57 NOT L59  
 L61 ( 35804)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC)  
 OR 25HCC OR ?CHOLECALCIF? OR ?VITAMIN? D OR (?VITAMIN?(1W)D)  
 OR ?VITAMIN? D3 OR (?VITAMIN(1W)D3?)  
 L62 ( 60)SEA FILE=HCAPLUS ABB=ON PLU=ON L61 (L) (L53 OR L54 OR L55)  
 L63 ( 8)SEA FILE=HCAPLUS ABB=ON PLU=ON L62 AND L47  
 L64 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 OR L60  
 L65 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 NOT (L36 OR L64)  
 L66 43649 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)  
 IMMUNOASSAY"+PFT,NT/CT  
 L67 51123 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,  
 NT/CT  
 L68 52678 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT  
 L69 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 AND ((L66 OR L67 OR L68))  
  
 L70 6955035 SEA FILE=HCAPLUS ABB=ON PLU=ON ?ASSAY? OR TEST? OR ?ANALY?  
 OR ?TRACE? OR ?DETECT? OR ?LABEL? OR ?CONJUGAT? OR ?ADDUCT?  
 L72 1825 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (L) L70  
 L73 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L72 AND L3  
 L74 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND L70  
 L75 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L69 OR L74  
 L76 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L75 NOT (L36 OR L64)  
 L77 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 NOT L76  
 L78 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L77 AND (XXVI OR RADIATION)/TI  
  
 L79 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 OR L78

=> file stnguide

FILE 'STNGUIDE' ENTERED AT 08:24:36 ON 23 NOV 2004  
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 LAST RELOADED: Nov 19, 2004 (20041119/UP).

=> d ibib abs ed hitind hitstr retable  
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

\* L79 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:555772 HCAPLUS  
 DOCUMENT NUMBER: 137:106040  
 TITLE: Vitamin D **assay**  
 INVENTOR(S): Garritty, Martha; Tran, Jacqueline  
 PATENT ASSIGNEE(S): Quest Diagnostics Inc., USA  
 SOURCE: PCT Int. Appl., 48 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057797	A2	20020725	WO 2001-US47267	20011203
WO 2002057797	A3	20030821		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
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GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1360507 A2 20031112 EP 2001-992054 20011203

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

US 2001-761969 A 20010116

WO 2001-US47267 W 20011203

AB The invention concerns a kit and a method of using the kit for determining a concentration of a vitamin D component. In a broad embodiment, the kit comprises

a releasing composition. The releasing composition facilitates in releasing the vitamin D component from a vitamin D component binding-protein. In one embodiment, the releasing composition is substantially free of an organic solvent.

In one embodiment, the kit further comprises a **detecting** composition. The **detecting** composition facilitates in determining the concentration of the vitamin D component. Further in accordance with the present invention, a kit according to this invention may be useful for determining the concentration of the

vitamin D component present in a mammal fluid. The mammal fluid may be milk, whole blood, serum, plasma and mixts. thereof.

ED Entered STN: 26 Jul 2002

IC ICM G01N033-82

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 13

ST vitamin D chemiluminescent **test** kit human blood **label**  
**assay**

IT Solvents

(organic; vitamin D **assay**)

IT Blood **analysis**

Blood plasma

Blood serum

Body fluid

Capillary tubes

Chemiluminescent substances

Fluorescent substances

Human

**Labels**

Magnetic materials

Mammalia

Milk

Process automation

Surfactants

**Test kits**

(vitamin D **assay**)

IT Radionuclides, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(vitamin D **assay**)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(vitamin D **assay**)

IT Bases, **analysis**  
 RL: ARU (Analytical role, unclassified); PRP (Properties); ANST  
 (Analytical study)  
 (vitamin D **assay**)

IT Oligomers  
 RL: PRP (Properties)  
 (vitamin D **assay**)

IT Proteins  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)  
 (vitamin D component binding-; vitamin D **assay**)

IT 50-14-6, Vitamin D2 67-97-0, Vitamin D3 511-28-4  
 , Vitamin D4 1406-16-2, Vitamin D 32222-06-3,  
 1,25-Dihydroxyvitamin D 64719-49-9, 25(Hydroxy)-vitamin D  
 71761-06-3, Vitamin D5 107950-93-6, Vitamin D6  
 RL: ANT (Analyte); ANST (Analytical study)  
 (vitamin D **assay**)

IT 58-85-5, Biotin 521-31-3, Luminol 22559-71-3, Acridinium  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (vitamin D **assay**)

IT 1310-58-3, Potassium hydroxide (K(OH)), **analysis** 1310-73-2,  
 Sodium hydroxide (Na(OH)), **analysis**  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (vitamin D **assay**)

IT 10016-20-3,  $\alpha$ -Cyclodextrin 12619-70-4, Cyclodextrin 12619-70-4D,  
 Cyclodextrin,  $\beta$ -randomly methylated derivs.  
 RL: ARU (Analytical role, unclassified); PRP (Properties); ANST  
 (Analytical study)  
 (vitamin D **assay**)

IT 9002-93-1, Triton X-100 9005-64-5, Tween-20  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (vitamin D **assay**)

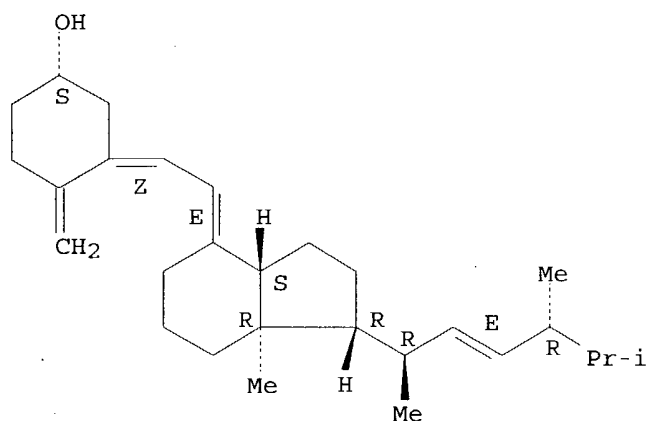
IT 54-21-7, Sodium salicylate 69-72-7D, metal derivs.  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (vitamin D **assay**)

IT 50-14-6, Vitamin D2 67-97-0, Vitamin D3 511-28-4  
 , Vitamin D4 32222-06-3, 1,25-Dihydroxyvitamin D  
 71761-06-3, Vitamin D5  
 RL: ANT (Analyte); ANST (Analytical study)  
 (vitamin D **assay**)

RN 50-14-6 HCAPLUS

CN 9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 $\beta$ ,5Z,7E,22E)- (9CI)  
 (CA INDEX NAME)

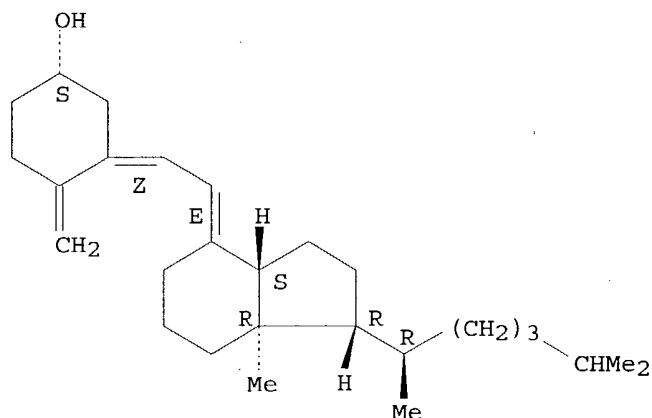
Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.



RN 67-97-0 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-trien-3-ol, (3 $\beta$ ,5Z,7E)- (9CI) (CA INDEX NAME)

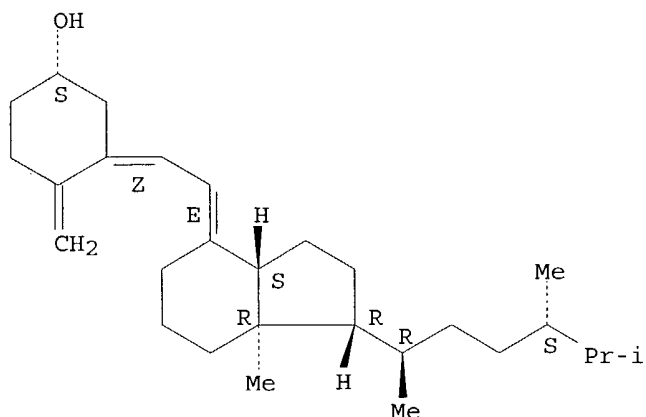
Absolute stereochemistry.  
Double bond geometry as shown.



RN 511-28-4 HCAPLUS

CN 9,10-Secoergosta-5,7,10(19)-trien-3-ol, (3 $\beta$ ,5Z,7E)- (9CI) (CA INDEX NAME)

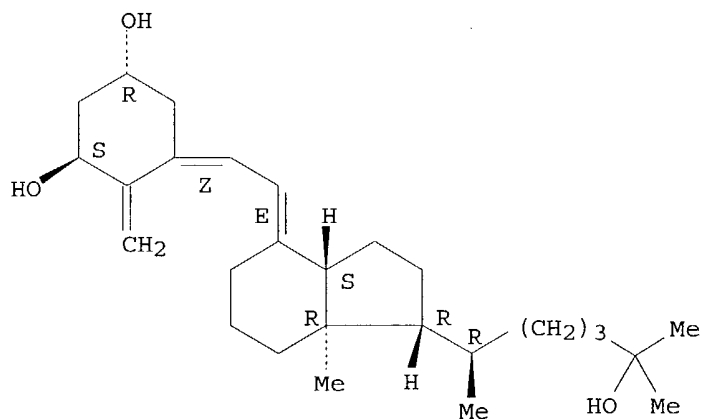
Absolute stereochemistry.  
Double bond geometry as shown.



RN 32222-06-3 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1 $\alpha$ ,3 $\beta$ ,5Z,7E) - (9CI) (CA INDEX NAME)

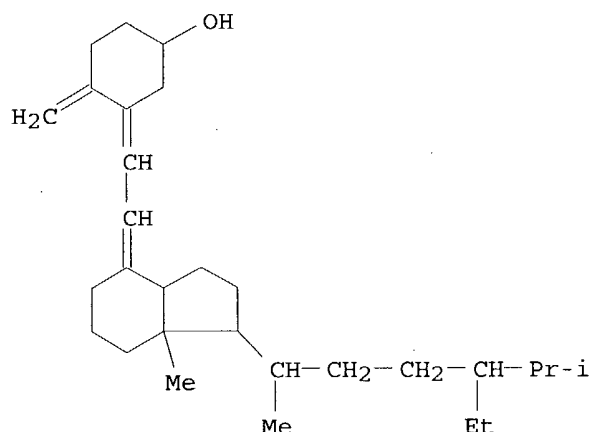
Absolute stereochemistry. Rotation (+).  
Double bond geometry as shown.



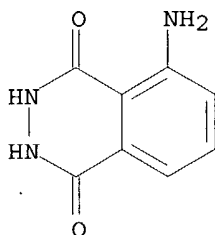
RN 71761-06-3 HCAPLUS

CN 9,10-Secostigmasta-5,7,10(19)-trien-3-ol, (3 $\beta$ ,5Z,7E) - (9CI) (CA INDEX NAME)





IT 521-31-3, Luminol  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (vitamin D assay)  
 RN 521-31-3 HCAPLUS  
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX  
 NAME)



=> d ibib abs ed hitind hitstr retable 2-  
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

L79 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1988:139408 HCAPLUS  
 DOCUMENT NUMBER: 108:139408  
 TITLE: Measurement of chemiluminescence of solids as a  
 possible indicator system for rapid dose determination  
 after radiation accidents?  
 AUTHOR(S): Hammermaier, A.; Reich, E.; Boegl, W.  
 CORPORATE SOURCE: Inst. Strahlenhyg., Bundesgesundheitsamtes,  
 Neuherberg, 8042, Fed. Rep. Ger.  
 SOURCE: ISH-Heft (1987), 110, 122 pp.  
 CODEN: ISHHE4; ISSN: 0175-4254  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 AB An indicator system capable of rapidly assessing the dose from accidental

radiation exposure is the method of measuring the chemiluminescence of solid substances. In this procedure, irradiated substances are dissolved in H<sub>2</sub>O or aqueous solns., which may contain a light amplifier, and the light is emitted as short pulses. The amount of light emitted is then correlated to the radiation dose. Some 14 different types of pharmaceutical tablets, 18 different pharmaceutical powders, and 32 other solid substances (foodstuffs, environmental materials, etc.) were tested as to their suitability for a rapid dose assessment by chemiluminescence measurement. In some pharmaceuticals, radiation doses of <1 Gy were still detectable. For pharmaceuticals in tablet form, the sample has to be processed prior to chemiluminescence measurements. All samples were exposed to a radiation dose of 100 grays. It will be very difficult to find any poorly soluble materials in the luminol solution which could indicate an exposure of ≤10 grays.

ED Entered STN: 15 Apr 1988

CC 71-7 (Nuclear Technology)

Section cross-reference(s): 8, 63

IT 50-62-4, Reoxyl 51-98-9 **67-97-0** 127-65-1 604-75-1,  
Adumbran 1104-22-9 1327-43-1 2955-38-6, Demetrin 8004-31-7  
8049-47-6, Pankreon 12557-04-9 13397-24-5, Gypsum(Ca(SO<sub>4</sub>).2H<sub>2</sub>O), uses  
and miscellaneous 22888-70-6, Legalon 23828-92-4 28911-01-5, Halcion  
37333-18-9, Osspulvit 50370-12-2, Bidocef 63749-94-0, Lidaprim  
65666-07-1 108727-26-0 108727-29-3 108727-31-7, CPS powder  
108727-70-4, Efisalin N 108727-76-0 108727-99-7, Mabigastrin  
**108728-06-9** 108728-19-4 108728-35-4, Rutanol 108728-36-5,  
Sanguisan 113387-17-0 113440-83-8 113446-56-3, Coritrat

RL: PROC (Process)

(in chemiluminescence dosimetry as indicator system for rapid dose measurements following radiation accidents)

IT **521-31-3**, Luminol

RL: PROC (Process)

(in chemiluminescence dosimetry, with pharmaceuticals as indicator system)

IT **67-97-0 108728-06-9**

RL: PROC (Process)

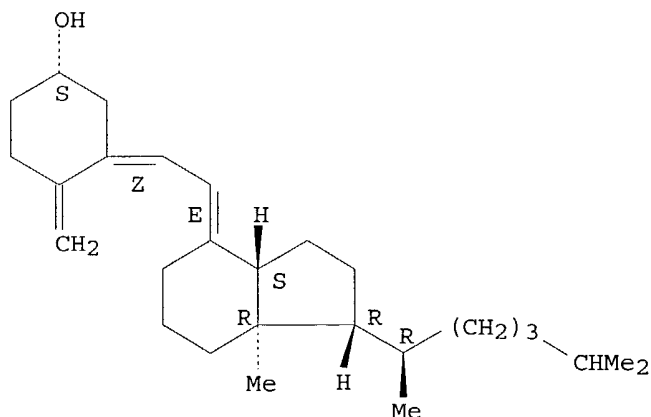
(in chemiluminescence dosimetry as indicator system for rapid dose measurements following radiation accidents)

RN 67-97-0 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-trien-3-ol, (3β,5Z,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

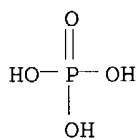


RN 108728-06-9 HCAPLUS  
 CN L-Ascorbic acid, mixt. with 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methylthiazolium chloride monohydrochloride, calcium hydrogen phosphate, 2-hydroxy-1,2,3-propanetricarboxylic acid calcium salt (2:3), retinyl acetate and (3 $\beta$ ,5Z,7E)-9,10-secocholesta-5,7,10(19)-trien-3-ol (9CI) (CA INDEX NAME)

CM 1

CRN 7757-93-9

CMF Ca . H3 O4 P

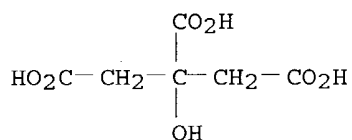


● Ca

CM 2

CRN 813-94-5

CMF C6 H8 O7 . 3/2 Ca



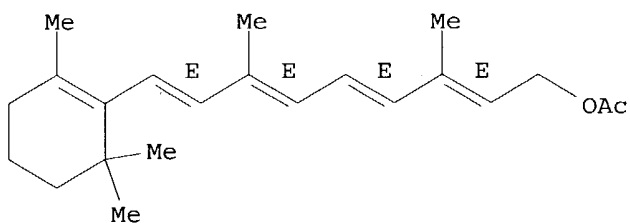
● 3/2 Ca

CM 3

CRN 127-47-9

CMF C22 H32 O2

Double bond geometry as shown.

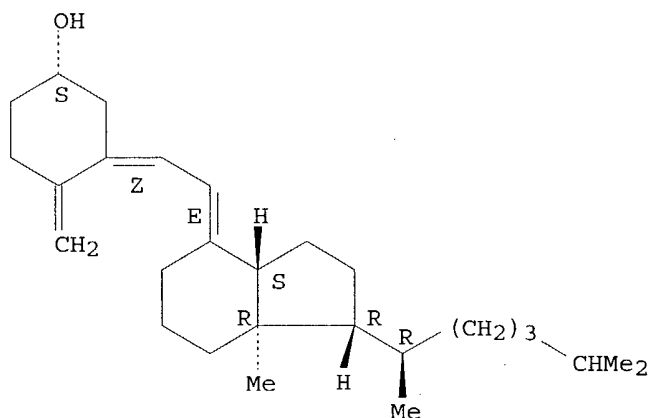


CM 4

CRN 67-97-0

CMF C27 H44 O

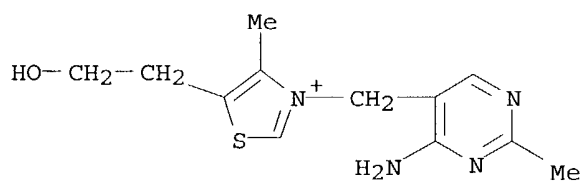
Absolute stereochemistry.  
Double bond geometry as shown.



CM 5

CRN 67-03-8

CMF C12 H17 N4 O S . Cl H . Cl

● Cl<sup>-</sup>

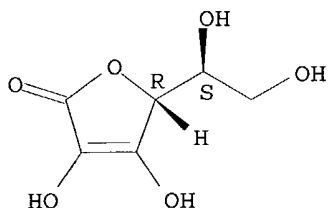
● HCl

CM 6

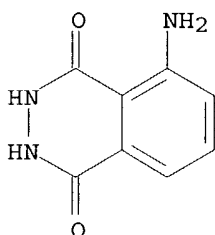
CRN 50-81-7

CMF C6 H8 O6

Absolute stereochemistry.



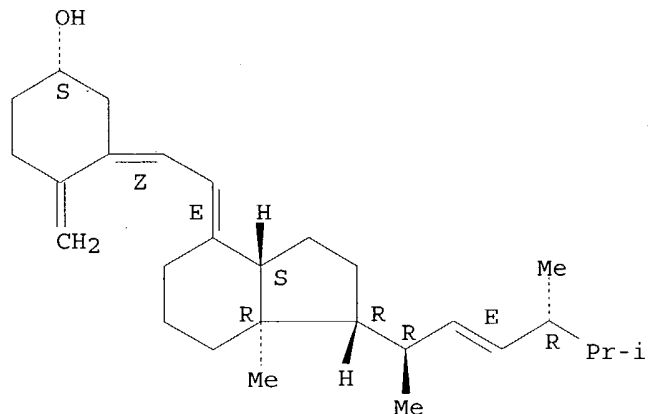
IT 521-31-3, Luminol  
 RL: PROC (Process)  
 (in chemiluminescence dosimetry, with pharmaceuticals as indicator system)  
 RN 521-31-3 HCAPLUS  
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



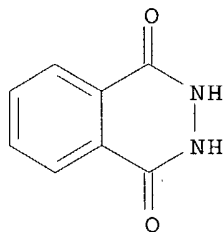
L79 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1987:636635 HCAPLUS  
 DOCUMENT NUMBER: 107:236635  
 TITLE: Diazapolycyclic compounds. XXVI.  
 Diazaquinone adducts from isoprenoid compounds  
 AUTHOR(S): Gomez Contreras, Fernando; Lora-Tamayo, Manuel; Sanz, Ana Maria  
 CORPORATE SOURCE: Fac. Cienc. Quim., Univ. Complutense, Madrid, 28040, Spain  
 SOURCE: Heterocycles (1987), 25(1), 193-200  
 CODEN: HTCYAM; ISSN: 0385-5414  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 107:236635  
 AB Diazaquinones such as phthalazine- and benzo(g)phthalazine-1,4-dione react with isoprenoid compds. to give [4 + 2] diazapolycyclic adducts. Treatment with  $\beta$ -myrcene, alloocimene, neoalloocimene or ergocalciferol affords the expected cycloaddn. products in good yields, whereas no reaction is found with  $\beta$ -ionone or retinol acetate. Some side-chain derivs. of these adducts have also been prepared  
 ED Entered STN: 25 Dec 1987  
 CC 28-15 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 30  
 IT 50-14-6, Ergocalciferol 123-35-3,  $\beta$ -Myrcene 673-84-7, Alloocimene 7216-56-0, Neoalloocimene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cycloaddn. reaction of, with phthalazinediones)  
 IT 1445-69-8 21389-21-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, by lead tetraacetate, phthalazinedione from)  
 IT 50-14-6, Ergocalciferol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cycloaddn. reaction of, with phthalazinediones)  
 RN 50-14-6 HCAPLUS  
 CN 9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 $\beta$ ,5Z,7E,22E) - (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.



IT 1445-69-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (oxidation of, by lead tetraacetate, phthalazinedione from)  
 RN 1445-69-8 HCAPLUS  
 CN 1,4-Phthalazinedione, 2,3-dihydro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L79 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1987:2581 HCAPLUS  
 DOCUMENT NUMBER: 106:2581  
 TITLE: Luminescent **tracers** coupled to liquids as probes and their use in **immunoassays**  
 INVENTOR(S): Kosak, Kenneth M.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 106,354.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4604364	A	19860805	US 1983-487267	19830421
US 4000252	A	19761228	US 1974-430921	19740104
PRIORITY APPLN. INFO.:			US 1974-430921	19740104
			US 1979-106354	19791221

AB A nonradioactive, photon-emitting substance is coupled to a ligand, antigen, or antibody for use as a **tracer** in an **immunoassay** for determination of a protein, hormone, drug, virus, etc. In a competitive binding **assay** for human IgG, bacterial luciferase was coupled to human IgG with glutaraldehyde to provide an immunoscintillation **tracer**. This reagent, anti-human IgG, and sample were mixed and incubated until equilibrium was reached. Bound and free **tracer** were separated on an immunosorbent column containing anti-human IgG immobilized on CNBr-activated Sepharose 4B. Luminescence was induced by addition of FMN, reduction with dithionite, and addition of O-saturated H<sub>2</sub>O containing 0.1%

decaldehyde, and was measured with a photometer.

ED Entered STN: 11 Jan 1987

IC ICM G01N021-76

ICS G01N033-532; G01N033-533; G01N033-536

NCL 436501000

CC 9-2 (Biochemical Methods)

Section cross-reference(s): 15

ST **immunoassay tracer** bioluminescent chemiluminescent substance; luciferase **tracer immunoassay** IgG

IT Blood **analysis**

(blood cells determination in, by luminescence **immunoassay**)

IT Antibiotics

Microorganism

Pesticides

Pharmaceutical **analysis**

Ribosome

Virus

(determination of, by luminescence **immunoassay**)

IT Agglutinins and Lectins

Antibodies

Antigens

Carbohydrates and Sugars, **analysis**

Coenzymes

Complement

Cytochromes

Deoxyribonucleic acids

Enzymes

Globulins, **analysis**

Haptens

Hormones

Interferons

Intrinsic factors

Ligands

Lipids, **analysis**

Proteins, **analysis**

Receptors

Ribonucleic acids

Steroids, **analysis**

RL: ANT (Analyte); ANST (Analytical study)

(determination of, by luminescence **immunoassay**)

IT Aequorins

RL: ANST (Analytical study)

(ligands **labeling** with, for luminescence **immunoassay**)

IT Annelid  
 Bacteria  
 Coelenterate  
 Crustacean  
 Dinoflagellate  
 Firefly  
 Mollusk  
 (luciferase of, ligands **labeling** with, for luminescence **immunoassay**)

IT Immunoglobulins  
 RL: ANT (Analyte); ANST (Analytical study)  
 (G, determination of, by luminescence **immunoassay**)

IT Luminescent substances  
 (bio-, ligands **labeling** with, for **immunoassay**)

IT Luminescent substances  
 (chemi-, ligands **labeling** with, for **immunoassay**)

IT Hydrazides  
 RL: ANST (Analytical study)  
 (cyclic, ligands **labeling** with, for luminescence **immunoassay**)

IT **Immunochemical analysis**  
 (luminescence **immunoassay**, labels for)

IT Organelle  
 (lumisome, ligands **labeling** with, for luminescence **immunoassay**)

IT 50-14-6, Calciferol 58-85-5, Biotin 65-23-6, Pyridoxine  
 1406-16-2 12001-76-2 12001-79-5  
 RL: ANT (Analyte); ANST (Analytical study)  
 (determination of, by luminescence **immunoassay**)

IT 521-31-3, Luminol 2315-97-1, Lucigenin 5796-84-9D,  
 Peroxyoxalic acid, derivs. 6788-84-7D, Dioxetane, derivs. 9014-00-0  
 42413-70-7 61970-00-1  
 RL: ANST (Analytical study)  
 (ligands **labeling** with, for luminescence **immunoassay**)

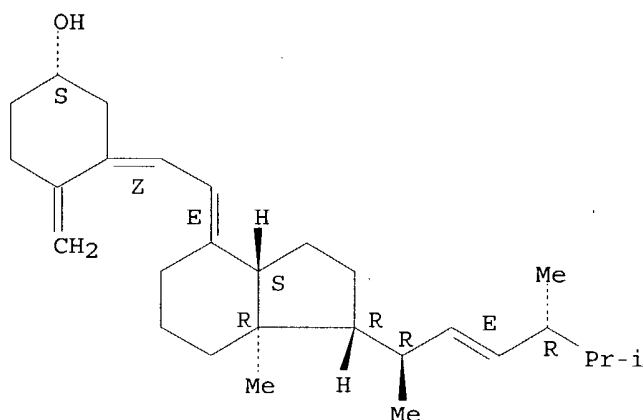
IT 50-14-6, Calciferol  
 RL: ANT (Analyte); ANST (Analytical study)  
 (determination of, by luminescence **immunoassay**)

RN 50-14-6 HCAPLUS

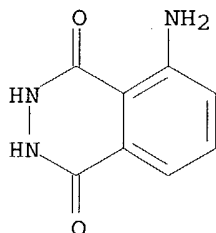
CN 9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 $\beta$ ,5Z,7E,22E) - (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.





IT 521-31-3, Luminol  
 RL: ANST (Analytical study)  
 (ligands labeling with, for luminescence immunoassay)  
 RN 521-31-3 HCAPLUS  
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



L79 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1982:139257 HCAPLUS  
 DOCUMENT NUMBER: 96:139257  
 TITLE: **Immunoassay** with fluorescent label  
 excited by luminescent reaction  
 INVENTOR(S): Campbell, Anthony K.; Simpson, John S. A.; Woodhead, James S.  
 PATENT ASSIGNEE(S): Welsh National School of Medicine, UK  
 SOURCE: Can., 30 pp. Division of Can. Appl. No. 316,349.  
 CODEN: CAXXA4  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 1116079	A2	19820112	CA 1981-374108	19810327
GB 2095830	A	19821006	GB 1981-33207	19781114
GB 2095830	B2	19830323		
CA 1113392	A1	19811201	CA 1978-316349	19781116

CH 645725	A	19841015	CH 1983-6672	19831213
PRIORITY APPLN. INFO.:			GB 1977-47839	A 19771117
			CA 1978-316349	A3 19781116
			CH 1978-11636	A 19781113
			GB 1978-44457	A 19781114

AB Methods are described for the use of luminescent compound-**labeled** reagents in **immunoassays** and protein-binding **assays**, in in-vitro and in-vivo turnover studies, in histochem. localization of compds., and in tracing substances undergoing redistribution in in biol. systems or being separated by e.g. chromatog. The methods are especially applicable

to homogeneous **assays** in which a luminescent compound-**labeled** substance is reacted with an antibody or antigen **labeled** with a fluorescent **label**, and a luminescent reaction is triggered, the energy from the luminescent reaction exciting the fluorescent **label** to produce a wavelength shift in light emission or a change in quantum yield. Thus, in a homogeneous **immunoassay** for cAMP, antibody to cAMP was **labeled** with luminol, and succinyl cAMP was **labeled** with fluorescein. The **labeled** antibody and **labeled** cAMP were incubated at pH 7.4, peroxidase and H2O2 were added, and light emission was measured at 540 nm. Emission at 540 nm is from the fluorescein-**labeled** succinyl cAMP which is bound to antibody, since unbound antibody emits at 460 nm. The wavelength shift occurs only when **labeled** cAMP and **labeled** antibody are bound together.

ED Entered STN: 12 May 1984

IC G01N021-64; G01N033-54

CC 9-2 (Biochemical Methods)

Section cross-reference(s): 1, 2, 4, 15

ST **immunoassay** fluorescence luminescence; cAMP **immunoassay** fluorescence luminescence; drug **immunoassay** fluorescence luminescence; hormone **immunoassay** fluorescence luminescence; vitamin **immunoassay** fluorescence luminescence; protein binding **assay** fluorescence luminescence

IT Erythrocyte

(antigen **detection** on, with luminol-**labeled** antibodies)

IT Cell membrane

(antigens **detection** in, of adipocyte by luminescence **immunoassay**)

IT Pharmaceutical **analysis**

(by **immunoassay** with fluorescent **label** excited by luminescence reaction)

IT Antigens

RL: ANT (Analyte); ANST (Analytical study)

(**detection** of, by luminescence **immunoassays**)

IT Haptens

Hormones

Vitamins

RL: ANT (Analyte); ANST (Analytical study)

(determination of, by **immunoassay** with fluorescent **label** excited by luminescence reaction)

IT Antibodies

RL: ANST (Analytical study)

(luminol-**labeled**, in **immunoassays**)

IT Adipose tissue, composition

(adipocyte, antigens **detection** in cell membrane of, by luminescence **immunoassay**)

IT **Immunochemical analysis**

(**immunoassay**, fluorescent **label** excited by

luminescent reaction in)

IT **Immunochemical analysis**  
(immunofluorescent staining, of antigens)

IT Fetoproteins  
RL: ANT (Analyte); ANST (Analytical study)  
( $\alpha$ -, determination of, by 2-site **immunoassay** with luminol-labeled antibodies)

IT 50-23-7 50-27-1 50-28-2, **analysis** 51-48-9,  
**analysis** 52-39-1 57-27-2, **analysis** 57-41-0  
57-83-0, **analysis** 58-22-0 59-05-2 60-92-4 67-52-7D,  
derivs. 69-72-7, **analysis** 81-24-3 475-31-0 561-27-3  
3616-08-8 6893-02-3 7665-99-8 **19356-17-3** 20830-75-5  
**32222-06-3**  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, by **immunoassay** with fluorescent label  
excited by luminescence reaction)

IT 9002-64-6  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, by **immunoassay** with luminol-labeled  
antibodies)

IT 2321-07-5D, reaction products with antigens  
RL: ANST (Analytical study)  
(in **immunoassay** with fluorescent label excited by  
luminescent reaction)

IT **521-31-3**  
RL: ANST (Analytical study)  
(in **immunoassays**)

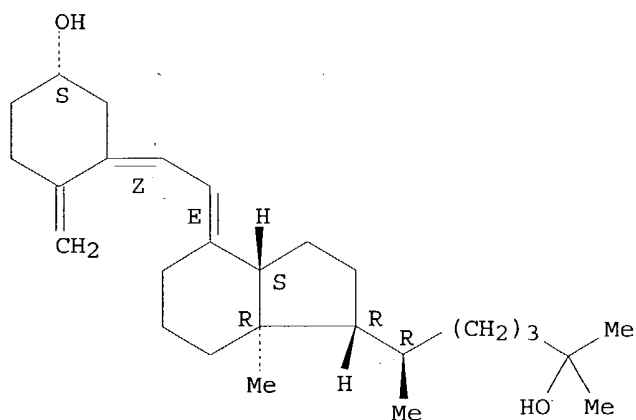
IT 9003-99-0 7722-84-1, biological studies  
RL: ANST (Analytical study)  
(in luminescence **immunoassays**)

IT **19356-17-3 32222-06-3**  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, by **immunoassay** with fluorescent label  
excited by luminescence reaction)

RN 19356-17-3 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3 $\beta$ ,5Z,7E)- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

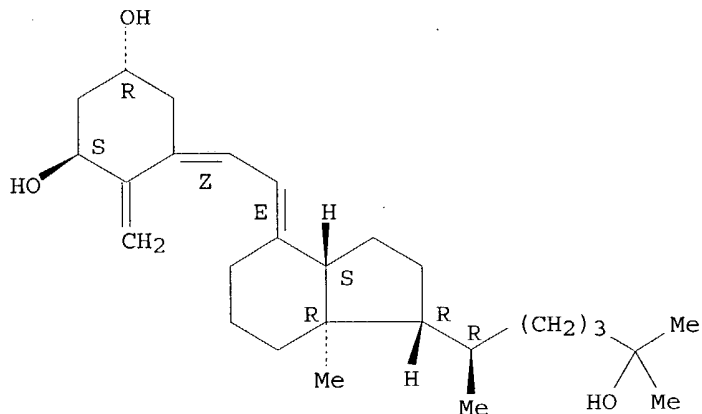


RN 32222-06-3 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1 $\alpha$ ,3 $\beta$ ,5Z,7E)-

(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
Double bond geometry as shown.



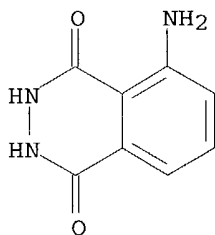
IT 521-31-3

RL: ANST (Analytical study)

(in immunoassays)

RN 521-31-3 HCAPLUS

CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



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